

AMENDMENTS TO THE CLAIMS:

1. (Original) A patch antenna including a dielectric substrate, a ground conductor formed on one main surface of the dielectric substrate, and a patch conductor formed on another main surface of said dielectric substrate, wherein

radiation efficiency is changed in a direction of wavelength-dependent length of said patch conductor.

2. (Original) A patch antenna according to claim 1, wherein a spacing between said patch conductor and said ground conductor is made nonuniform in said direction of wavelength-dependent length.

3. (Original) A patch antenna according to claim 2, wherein thickness of said dielectric substrate is changed in said direction of wavelength-dependent length.

4. (Original) A patch antenna according to claim 1, wherein a dielectric constant is changed in said direction of wavelength-dependent length.

5. (Currently Amended) A patch antenna according to ~~any one of claims 1 to 4~~ claim 1, wherein a dielectric is loaded on said patch conductor.

6. (Currently Amended) A cellular telephone with a patch antenna built-in according to ~~any one of claims 1 to 5~~ claim 1, wherein

said cellular telephone includes a housing, and said patch antenna is arranged in such a manner that said direction of wavelength-dependent length matches the direction of thickness of said housing, and that a side thereof with higher radiation efficiency is faced opposite to a side of said housing making contact with head of a person.

7. (New) A patch antenna according to claim 2, wherein a dielectric is loaded on said patch conductor.

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8. (New) A patch antenna according to claim 3, wherein a dielectric is loaded on said patch conductor.

9. (New) A patch antenna according to claim 4, wherein a dielectric is loaded on said patch conductor.

10. (New) A cellular telephone with a patch antenna built-in according to claim 2, wherein

said cellular telephone includes a housing, and said patch antenna is arranged in such a manner that said direction of wavelength-dependent length matches the direction of thickness of said housing, and that a side thereof with higher radiation efficiency is faced opposite to a side of said housing making contact with head of a person.

11. (New) A cellular telephone with a patch antenna built-in according to claim 3, wherein

said cellular telephone includes a housing, and said patch antenna is arranged in such a manner that said direction of wavelength-dependent length matches the direction of thickness of said housing, and that a side thereof with higher radiation efficiency is faced opposite to a side of said housing making contact with head of a person.

12. (New) A cellular telephone with a patch antenna built-in according to claim 4, wherein

said cellular telephone includes a housing, and said patch antenna is arranged in such a manner that said direction of wavelength-dependent length matches the direction of thickness of said housing, and that a side thereof with higher radiation efficiency is faced opposite to a side of said housing making contact with head of a person.

13. (New) A cellular telephone with a patch antenna built-in according to claim 5, wherein

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said cellular telephone includes a housing, and said patch antenna is arranged in such a manner that said direction of wavelength-dependent length matches the direction of thickness of said housing, and that a side thereof with higher radiation efficiency is faced opposite to a side of said housing making contact with head of a person.